

General Dynamics Armament)	DEPARTMENTAL
And Technical Products)	FINDINGS OF FACT AND ORDER
York County)	AIR EMISSION LICENSE
Saco, Maine)	
A-434-71-L-M/R)	

After review of the air emissions license renewal and minor revision application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. General Dynamics Armament and Technical Products (GDATP) of Saco, Maine has applied to renew their Air Emission License, permitting the operation of emission sources associated with their military weapons manufacturing facility.
2. GDATP has also requested a minor revision to increase the Evaporator coolant fluid usage from 4,000 gallons per year to 10,000 gallons per year.

B. Emission Equipment

GDATP is authorized to operate the following air emission units:

Boilers

<u>Equipment</u>	<u>Date of Construction</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Fuel Type, %Sulfur</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Stack</u>
BLR1	1971	25.2	#6, 0.7%	168	1
BLR2	1951	25.2	#6, 0.7%	168	2
BLR3	1951	25.2	#6, 0.7%	168	3

Heat Treat Units (natural gas fired)

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate cfh</u>
HT-6213	1.0	1000
HT-A026	1.0	1000
HT-0005	1.6	1500
HT-0006	1.2	1145

Heat Treat Units (Continued)

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate cfh</u>
HT-0001*	0.07	66
HT-0002*	0.87	800
HT-0003*	0.47	450
HT-0004*	0.25	240
HT-B301*	0.5	500

* These units are insignificant as outlined in Appendix B of Chapter 115 of the Air Regulations and are therefore noted for inventory purposes only.

Emergency Back-up Generators

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Fuel Type, % Sulfur</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Stack</u>
Generator 1	2.4	diesel, 0.05%	17.5	4
Generator 2*	2.1	diesel, 0.05%	15.3	8
Fire Pump 1	1.1	diesel, 0.05%	8.0	5

* Generator 2 is located at the Waste Water Pre-Treatment Plant. All other fuel burning equipment is located in the boiler room.

Process Equipment

<u>Equipment</u>	<u>Pollutant</u>	<u>Control Device</u>
Chrome Plating Miscellaneous Parts Line (Line #3)	Particulate Matter (PM), chrome	Packed Bed Scrubber #1
Chrome Plating Small Barrel Plating Line (Line #4)	PM, chrome	Fiber-Bed Mist Eliminator
Chrome Plating Large Barrel Plating Line (Line #5)	PM, chrome	Fiber-Bed Mist Eliminator
Tin/Lead Plating Line	PM, nickel, lead	Packed Bed Scrubber #1
Spray Booth	PM, Volatile Organic Compounds (VOC)	Filtration, HVLP guns, Carbon filters
Evaporator	VOC	Uncontrolled
Shot Blasting Rotary Table 1	PM	Cyclone, filter
Shot Blasting Rotary Table 2	PM	Cyclone, filter
Shot Blasting Rotary Table 3	PM	Cyclone, filter
Shot Blasting Gun Barrel Unit 1	PM	Cyclone, filter
Foam-In-Place	VOC, Hazardous Air Pollutants (HAP)	Uncontrolled
Solvent Degreasers	VOC	Per MEDEP Chapter 130

C. Application Classification

The renewal application for GDATP includes an increase of 2.4 TPY of VOCs from the Evaporator. As such, this application has been processed as a minor revision in conjunction with a renewal.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boiler #1, #2 and #3

Boiler #1, #2 and #3 fire #6 fuel oil and are each rated at 25.2 MMBtu/hr. Each were manufactured prior to June 9, 1989 and are therefore not subject to the requirements of EPA New Source Performance Standard (NSPS) 40 CFR Part 60, Subpart Dc for boilers between 10 and 100 MMBtu/hr.

BPT for Boiler #1, #2 and #3 is the following:

- Use of 0.7% sulfur #6 fuel oil.
- Emission rates for PM are regulated by MEDEP Regulations, Chapter 103.
- SO₂, NO_x, CO and VOC emission rates are based on AP-42 data dated 10/96 for #6 fuel oil fired boilers smaller than 100 MMBtu/hr.
- Visible emissions from the stacks serving Boiler #1, #2 and #3 (Stack #1, #2 and #3 respectively) shall not exceed 30% opacity on a six (6) minute block average basis.

C. Heat Treat Process

The heat treat process consists of six steps which process the parts to increase hardness, decrease brittleness, increase fracture resistance, and enhance carbon content of the metal surface. The six steps are cleaning, hardening, inducting, annealing, carbonizing, and tempering.

Four of the nine heat treat units (HT-6213, HT-A026, HT-0005 and HT-0006) are larger than 1.0 MMBtu/hr, however they are not subject to the requirements of EPA New Source Performance Standard (NSPS) 40 CFR Part 60, Subpart Dc for boilers between 10 and 100 MMBtu/hr.

BPT for HT-6213, HT-A026, HT-0005 and HT-0006 is the following:

- Use of natural gas.
- Emission rates for PM are regulated by MEDEP Regulations, Chapter 103, however BPT is more stringent.
- SO₂, NO_x, CO and VOC emission rates are based on AP-42 data dated 10/96 for natural gas fired boilers smaller than 100 MMBtu/hr.
- Visible emissions from the vents serving the heat treat units shall not exceed 10% opacity on a six (6) minute block average basis.

D. Emergency Back-Up Generators

Diesel fuel having a maximum sulfur content of 0.05% will be fired in each of the three emergency generators. The annual hours of operation for each generator shall be less than 500 hours per year. Emission limits from the generator were calculated using EPA AP-42 emission factors.

Visible emissions from each emergency generator shall not exceed 30% on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

E. Chrome Plating:

GDATEP operates three chrome electroplating lines (Line #3, #4 and #5) which must meet the requirements of 40 CFR Part 63, Subpart N "National Emission Standards From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks". Emissions generated by these lines include particulate and chrome and are drawn to one of two control devices: a Packed Bed Scrubber (PBS) or the Fiber-Bed Mist Eliminator (FBME). Tanks 6, 7, 8, and 9 vent to the PBS and tanks 21, 22, 23, 41, 42, 43 and 44 vent to the FBME.

GDATP has requested a federally enforceable limitation on the total cumulative annual rectifier capacity of less than 60 million amp-hr/yr so as to be deemed a “Small Hard Chromium Electroplating Facility” as provided for in 40 CFR Part 63.341 and 63.342(c)(2).

Compliance with the emission standards, operation standards, recordkeeping, and reporting requirements of the MACT is considered BPT for this license.

F. Tin/Lead Plating:

Pollutants emitted from this process include particulate matter, nickel, lead and hydrochloric acid. BPT for this process is the use of PBS #1 to ensure compliance with the emission limits of 0.6 mg/dscm for Nickel, 1.4 mg/dscm for Lead, and 0.3425 lb/hr for HCl.

G. Spray Booth

GDATP operates a spray booth to apply coatings to the manufactured products. To meet the military customer specifications for military aircraft gun systems, conventional spray gun application is required.

BPT for the Spray Booth is:

- Use of high volume/low pressure (HVLP) spray guns for non-aircraft gun coating.
- A maximum application rate of 0.75 gallons per hour.
- A maximum of one (1) spray gun is used in the booth at any given time.
- Use of paint arrestors
- Use of a two-stage filtration system (pre-filter followed by a HEPA filter)

H. Evaporator:

GDATP operates an evaporator to evaporate water from the process coolant solutions. The VOC content of the two coolant products used is 0.4 lb/gal for the Safety-Cool 984 and 0.64 lb/gal for the Syntilo 9954. The maximum amount of coolant flow through the unit on an annual basis is 10,000 gallons. With an assumption that 100% of the VOCs are volatilized and only coolant with a VOC content of 0.64 lb/gal is used and the coolant is diluted at a ratio of 4 parts water to one part coolant prior to use, VOC emissions from the evaporator are 0.8 TPY.

I. Shot Blasting:

Three rotary shot blast tables and one barrel shot blast unit are used to treat the surface of the parts. Fine steel shot is used under high air flow rates in these units to blast the surface of the parts. The pollutant emitted from this source is particulate matter and is controlled by a cyclone followed by a fabric filter.

J. Foam-In-Place:

The Foam-In-Place process uses a two component polyurethane resin product which, when mixed, produces a rigid polyurethane material used to package products. This is a CFC and HCFC-free material, however small quantities of VOCs, Glycol ethers, and Polymetric Diphenylmethane Diisocyanate (MDI) are emitted.

K. Solvent Degreasers

GDATP maintains between 12 and 25 solvent degreasers, depending on the manufacturing needs of the facility. These cleaners are located throughout the milling areas of the facility and are subject to MEDEP Chapter 130 requirements.

L. Annual Emissions

GDATP has the following annual emissions, based on a 12 month rolling total:

Total Annual Emissions for the Facility
(used to calculate the annual license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC	HCl	Ni	Pb	Cr	Total HAP
<u>Boilers</u>	9.0	9.0	32.8	20.3	1.5	0.1	-	-	-	-	-
<u>Heat Treat</u>	1.1	1.1	0.01	2.1	1.6	0.1	-	-	-	-	-
<u>Generator#1</u>	0.2	0.2	0.03	2.6	0.6	0.2	-	-	-	-	-
<u>Generator #2</u>	0.2	0.2	0.03	2.3	0.5	0.2	-	-	-	-	-
<u>Fire Pump</u>	0.1	0.1	0.01	1.2	0.3	0.1	-	-	-	-	-
<u>Chrome Plating</u>	-	-	-	-	-	-	-	-	-	0.1	0.01
<u>Tin/Pb Plating</u>	-	-	-	-	-	-	1.5	0.1	0.2	-	1.8
<u>Spray Booth</u>	-	-	-	-	-	0.4	-	-	-	0.1	0.1
<u>Evaporator</u>	-	-	-	-	-	0.8	-	-	-	-	-
<u>Foam-in-Place</u>	-	-	-	-	-	0.2	-	-	-	-	0.05
<u>Degreaser</u>	-	-	-	-	-	3.0	-	-	-	-	-
<u>Total TPY</u>	10.6	10.6	32.9	28.5	4.5	5.1	1.5	0.1	0.2	0.2	1.96

III.AMBIENT AIR QUALITY ANALYSIS

A. Overview

A combination of screening and refined modeling was performed to show that emissions from GDATP, in conjunction with other area sources, would not cause or contribute to violations of Maine Ambient Air Quality Standards (MAAQS) for SO₂, PM₁₀, NO₂ and CO.

It has been determined by MEDEP-BAQ that GDATP does not consume SO₂, PM₁₀ or NO₂ increment. Therefore, no Class I or II increment analyses were performed.

Since the current licensing action does not represent a change in current maximum licensed allowed emissions, it has been determined by MEDEP-BAQ that an evaluation of Class I visibility and dry/wet deposition is not required.

B. Model Inputs

The ISCST3 model (in refined simple terrain mode) was used to address standards in all areas. In addition, the COMPLEX-I VALLEY (CI-VM) model was used to evaluate impacts in intermediate and complex terrain, i.e., areas where terrain elevations exceed the proposed stack-top elevations. Since the all GDATP stacks are greater than $H + 0.5L$ (where H is the height of the controlling structure and L is the lesser of the height or maximum projected width of that structure), no cavity analysis were performed.

All modeling was performed in accordance with all applicable requirements of the Maine Department of Environmental Protection, Bureau of Air Quality (MEDEP-BAQ) and the United States Environmental Protection Agency (USEPA).

A valid five (5) year hourly meteorological off-site database was used in the refined modeling. The wind data was collected at a height of 10 meters at the Portland National Weather Service (NWS) meteorological monitoring site during the 5-year period 1986-1990. Portland National Weather Service surface temperature was also used. Hourly cloud cover, ceiling height and surface wind speed, also collected at Portland NWS, were used to calculate stability. Hourly mixing heights were derived from Portland NWS surface and upper air data.

Stack parameters used in the modeling for GDATP are listed in Table IV-1. The modeling analyses accounted for the potential of building wake effects on emissions from all modeled stacks that are below their respective formula GEP stack heights.

Table IV-1. Stack Parameters

Facility/Stack	Stack Base Elevation (m)	Stack Height (m)	GEP Stack Height (m)	Stack Diameter (m)	UTM Easting (km)	UTM Northing (km)
CURRENT						
GDATP						
• Stack #1	34.80	17.07	26.67	0.61	383.278	4818.943
• Stack #2	34.80	17.07	26.67	0.76	383.279	4818.940
• Stack #3	34.80	17.07	26.67	0.76	383.282	4818.935
Southern Maine Medical Center (SMMC)						
• Main Stack	24.70	45.72	56.00	0.66	379.470	4814.680
West Point Stevens						
• Main Stack	18.30	38.10	41.41	0.80	382.423	4816.500

The emission parameters for GDATP and other nearby sources for MAAQS modeling are listed in Table IV-2. All emission parameters are based on the maximum license allowed operating configurations. For the purpose of determining NO₂ and PM₁₀ impacts, all NO_x and PM emissions were conservatively assumed to convert to NO₂ and PM₁₀, respectively.

Table IV-2. Emission Parameters

Facility/Stack	Averaging Period(s)	SO ₂ (g/s)	PM ₁₀ (g/s)	NO ₂ (g/s)	CO (g/s)	Temp (K)	Stack Velocity (m/s)
CURRENT							
GDATP – Maximum Load Case							
• Stack #1	All	2.32	0.64	1.43	0.11	450.00	12.33
• Stack #2	All	2.32	0.64	1.43	0.11	450.00	7.95
• Stack #3	All	2.32	0.64	1.43	0.11	450.00	7.95
Southern Maine Medical Center (SMMC)							
• Main Stack	All	4.40	0.39	1.80		450	13.17
West Point Stevens							
• Main Stack	All	0.01		2.08		450	12.70

C. Applicant's modeled impacts

ISCST3 refined modeling (in simple terrain), using five years of meteorological data, and CI-VM screening modeling (in intermediate and complex terrain) was performed for operating scenarios that represented maximum, typical and minimum operations for GDATP.

The model results for GDATP alone in simple and complex terrain are shown in Tables IV-3 and IV-4, respectively. Maximum predicted impacts that exceed their respective significance level are indicated in boldface type. No further analysis was required for pollutant/terrain combinations that did not exceed their respective significance levels.

Table IV-3. Maximum ISCST3 Simple Terrain Predicted Impacts from GDATP Alone

Pollutant	Averaging Period	Max Impact ($\mu\text{g}/\text{m}^3$)	Receptor UTM E (km)	Receptor UTM N (km)	Receptor Elevation (m)	Class II Significance Level ($\mu\text{g}/\text{m}^3$)
SO ₂	3-hour	281.37	383.400	4818.950	33.53	25
	24-hour	99.83	383.400	4818.950	33.53	5
	Annual	10.97	383.400	4818.950	33.53	1
PM10	24-hour	27.54	383.400	4818.950	33.53	5
	Annual	2.98	383.400	4818.950	33.53	1
NO ₂	Annual	6.65	383.400	4818.950	33.53	1
CO	1-hour	16.12	383.400	4818.950	33.53	2000
	8-hour	8.44	383.400	4818.950	33.53	500

Table IV-4. Maximum CI-VM Complex Terrain Predicted Impacts from GDATP Alone

Pollutant	Averaging Period	Max Impact ($\mu\text{g}/\text{m}^3$)	Receptor UTM E (km)	Receptor UTM N (km)	Receptor Elevation (m)	Class II Significance Level ($\mu\text{g}/\text{m}^3$)
SO ₂	3-hour	138.61	383.000	4815.750	60.96	25
	24-hour	38.50	383.000	4815.750	60.96	5
	Annual	12.32	383.000	4815.750	60.96	1
PM10	24-hour	10.62	383.000	4815.750	60.96	5
	Annual	3.40	383.000	4815.750	60.96	1
NO ₂	Annual	7.59	383.000	4815.750	60.96	1
CO	1-hour	7.30	383.000	4815.750	60.96	2000
	8-hour	5.11	383.000	4815.750	60.96	500

D. Combined Source Modeling

Because modeled impacts from GDATP were greater than significance levels for all SO₂, PM₁₀ and NO₂ averaging periods, other sources not explicitly included in the modeling analysis must be included by using representative background concentrations for the area. Background concentrations used were based on conservative Southern Maine rural background monitoring data for SO₂ from data

collected in the Bridgeton area (Upper Ridge Road site), for PM₁₀ from data collected in the Jay area (Crash Road site) and for NO₂ from data collected in the Portland area (PEOPL site). These background values are listed in Table IV-5.

TABLE IV-5. Background Concentrations (µg/m³)

Pollutant	Averaging Period	Background
SO ₂	3-hour	52
	24-hour	29
	Annual	5
PM ₁₀	24-hour	48
	Annual	11
NO ₂	Annual	11

As GDATP's SO₂, PM₁₀ and NO₂ impacts were significant, MEDEP examined other sources whose impacts would be significant in or near GDATP's significant impact area. The other sources explicitly included in the modeling were Southern Maine Medical Center (SMMC) and West Point Stevens, both located in Biddeford.

For all pollutant averaging periods, the maximum modeled impacts from the model predicting the highest concentrations were added with conservative background concentrations to demonstrate compliance with MAAQS, as shown in Table IV-6. Because all impacts using this method meet MAAQS, no further MAAQS modeling analyses need to be performed.

TABLE IV-6 Maximum Combined Source Impacts from GDATP (µg/m³)

Pollutant	Averaging Period	Max Impact (µg/m³)	Receptor UTM E (km)	Receptor UTM N (km)	Receptor Elevation (m)	Back-Ground (µg/m³)	Max Total Impact (µg/m³)	MAAQS (µg/m³)
SO ₂	3-hour	281.36	383.400	4818.950	33.53	52	333.36	1150
	24-hour	99.84	383.400	4818.950	33.53	29	128.84	230
	Annual	12.32	383.000	4815.750	60.96	5	17.32	57
PM10	24-hour	27.54	383.400	4818.950	33.53	48	75.54	150
	Annual	3.40	383.000	4815.750	60.96	11	14.40	40
NO ₂	Annual	9.30	382.500	4815.750	54.86	11	20.30	100

E. Increment

It has been determined by MEDEP-BAQ that GDATP does not consume SO₂, PM₁₀ or NO₂ increment. Therefore, no Class I or II increment analyses were performed.

F. Class I Impacts

Since the current licensing action does not represent a change in maximum licensed allowed emissions, it has been determined by MEDEP-BAQ that an evaluation of Class I increment, visibility and dry/wet deposition is not required.

G. Summary

It has been demonstrated that emissions from GDATP, in conjunction with other area sources, will not cause or contribute to violations of Maine Ambient Air Quality Standards (MAAQS) for SO₂, PM₁₀, NO₂ or CO or to Class I or Class II increments for SO₂, PM₁₀ or NO₂.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-434-71-L-M/R, subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either

- the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
 - (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.
 - (6) The license does not convey any property rights of any sort, or any exclusive privilege.
 - (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
 - (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
 - (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
 - (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
 - (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment

- operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
- b. pursuant to any other requirement of this license to perform stack testing.
- (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
- (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
- (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
- (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department

within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.

- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

(16) **Boilers 1, 2, and 3**

A. Emissions from each boiler shall not exceed the following:

Boiler 1, 2 and 3 Emission Limits (per unit)

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.20	5.04
PM ₁₀	n/a	5.04
SO ₂	n/a	18.35
NO _x	n/a	11.34
CO	n/a	0.84
VOC	n/a	0.22

- B. Visible emissions from the stacks serving Boiler #1, #2 and #3 (Stack #1, Stack #2 and Stack #3, respectively) shall not exceed 30% opacity on a six (6) minute block average basis.
- C. Combined fuel use in Boilers 1, 2 and 3 shall not exceed 600,000 gallons per year (12 month rolling total) of #6 fuel oil, with a maximum sulfur content of 0.7% by weight. Compliance is based on fuel receipts from the supplier documenting the quantity delivered and the sulfur content of the delivered fuel.

(17) **Heat Treat Units**

A. Emissions from HT-6213 and HT-A026 each shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.05
PM ₁₀	0.05
SO ₂	0.01
NO _x	0.1
CO	0.08
VOC	0.01

B. Emissions from HT-0005 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.08
PM ₁₀	0.08
SO ₂	0.01
NO _x	0.16
CO	0.12
VOC	0.01

C. Emissions from HT-0006 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.06
PM ₁₀	0.06
SO ₂	0.01
NO _x	0.12
CO	0.09
VOC	0.01

D. Visible emissions from the vents serving heat treat units HT-6213, HT-A026, HT-0005 and HT-0006 shall not exceed an opacity of 10 percent on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

(18) **Emergency Back-up Generators and Fire Pump**

A. Emissions from Generator 1 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.74
PM ₁₀	0.74
SO ₂	0.12
NO _x	10.58
CO	2.28
VOC	0.84

B. Emissions from Generator 2 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.65
PM ₁₀	0.65
SO ₂	0.11
NO _x	9.26
CO	2.00
VOC	0.74

C. Emissions from the Fire Pump shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.34
PM ₁₀	0.34
SO ₂	0.06
NO _x	4.85
CO	1.05
VOC	0.39

D. Generator 1, Generator 2 and the Fire Pump each shall be limited to 500 hours per year of operation, based on a 12 month rolling total. An hour meter shall be maintained and operated on each emergency diesel generator.

E. The sulfur content of the fuel shall be less than or equal to 0.05% by weight, demonstrated by fuel receipts from the supplier.

F. A log documenting the dates, times and reasons for operation for each generator shall be kept.

G. Visible emissions from each emergency generator shall not exceed 30% opacity on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.

(19) **Chrome Plating**

A. Emissions from chrome plating tanks 6, 7, 8, and 9 shall vent to the packed bed scrubber (PBS#3) and tanks 21, 22, 23, 41, 42, 43, and 44 shall vent to the Fiber-Bed Mist Eliminator (FBME) system.

B. GDATP shall maintain monthly rectifier capacity records to demonstrate the actual rectifier capacity is less than 60 million amp-hr/yr. The actual cumulative rectifier capacity for the previous 12-month rolling period shall be tabulated monthly by adding the capacity for the current month to the capacities for the previous 11 months.

- C. GDATP shall have an Operation and Maintenance Plan meeting the requirements of 40 CFR Part 63.342(f)(3).
- D. GDATP shall operate and maintain equipment in a manner consistent with good air pollution control practices and consistent with the Operation and Maintenance Plan.
- E. GDATP shall monitor and record the velocity pressure at the inlet to the PBS system and the pressure drop across the scrubber system once each day that the system is operating.
- Compliance with the chrome emission limits from PBS #3 is based on the velocity pressure being ± 10 percent of the value established during the initial performance test, and within ± 1 inch of water column of the pressure drop value established during the most recent performance test.
- F. GDATP shall monitor and record the pressure drop across the FBME, and the control device installed upstream of the fiber bed, once each day the system is operating.
- Compliance with the chrome emission limit from the FMBE is the FBME and the upstream control device being operated within ± 1 inch of water column of the pressure drop value established during the initial performance test for that line.
- G. Surface tension on the chrome electroplating tanks shall be maintained below 45 dyne/cm. GDATP shall monitor surface tension of the chrome plating tanks once every 40 hours of operation to assure compliance with the 45 dyne/cm limit. If, however, after compliance testing GDATP can demonstrate compliance with its emission limits without the use of additives to limit surface tension GDATP will not be required to meet the 45 dyne/cm limit and corresponding recordkeeping.
- H. GDATP shall utilize control equipment such as mist eliminators, fume suppressants, composite mesh pads, polyballs, or any combination of the four in order to meet the emission limit requirements established below.
- I. Emissions from the chrome plating process shall not exceed the following:

<u>Equipment</u>	<u>PM</u> <u>mg/dscm</u>	<u>State-Only</u> <u>Chrome Limits</u> <u>(mg/dscm)</u>	<u>Federal MACT</u> <u>Chrome Limits</u> <u>(mg/dscm)</u>
FBME for Line #4	0.0315	0.015	0.03
FBME for Line #5	0.0315	0.015	0.03
PBS #3 (Line #3)	0.0315	0.015	0.03

- J. GDATP shall demonstrate compliance with the above PM and Chrome mg/dscm emission rates once every two years. The first test shall be conducted no later than **September 30, 2003**.

PM testing shall be performed in accordance with EPA Method 5.

Chrome testing shall be performed in accordance with EPA Method 306 or Method 306A or an alternate test method if the test method has been validated using Method 301, Appendix A of Part 63 and if approved by the Department.

- K. Chrome emissions from the plating process shall not exceed 0.1 tons per year (12-month rolling total). Compliance is based on the concentration limits set forth in Condition 19(I) above, flow rate calculations for each piece of control equipment and the hours of operation. GDATP shall keep records of flow rates and any times these flow rates are altered as part of air balancing operations in the system.
- L. GDATP shall prepare a summary report to document the ongoing compliance status of the facility. The report shall contain the information identified in 40 CFR Part 63.347(g)(3), and shall be completed annually and maintained on site. If exceedances occur, or at the request of the Department or EPA, the report shall be submitted semiannually.
- M. GDATP shall record any actions taken during malfunctions which were inconsistent with the Operation and Maintenance Plan and notify the Department within 2 working days. A letter shall be sent to the Department within 7 working days of the event.
- N. GDATP shall comply with all applicable emission standards, work practice standards, operation standards, testing requirements, reporting requirements, and recordkeeping requirements of 40 CFR Part 63 Subpart N "National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks."

(20) **Tin/Lead Plating**

- A. The tin/lead plating line shall operate a maximum of 800 hr/yr. GDATP shall maintain an hours of operation log for the tin/lead plating line.
- B. Emissions from the tin/lead plating tanks shall vent to PBS#1. GDATP shall maintain and operate the scrubber according to the manufacturer's specifications. A log shall be kept of all routine and non-routine maintenance on the scrubber. GDATP shall install a pressure drop indicator on the scrubber. Pressure drop across the scrubber shall be measured once per day of operation and be recorded in a log.

- C. Annual emissions from the tin/lead plating process shall not exceed the following:

	Tons/year
Ni	0.1
Pb	0.2
HCl	1.5

- D. Compliance with the above ton/year limits is based on mass balance of the tin/lead plating process. GDATP shall maintain monthly records of tin and lead material useage, nickel raw material usage, the amount of tin/lead in the plating tank, the amount of nickel in the nickel plating tank, the amount of hydrochloric acid added to the tank, and the amount of tin/lead/nickel on the final products. GDATP shall calculate the difference as the mass of tin/lead/nickel/hydrochloric acid releasted through the stack.

(21) Spray Booth

- A. Only high volume/low pressure (HVLP) spray guns with a maximum application rate of 0.75 gallons per hour shall be used on non-aircraft gun systems.
- B. Conventional spray systems may be used on the aircraft gun systems with a maximum application rate not to exceed 0.75 gallons per hour, averaged over a 24-hour period. Compliance will be based on recordkeeping showing the volume of coating applied to the aircraft gun systems on a daily basis.
- C. GDATP shall limit the use of Chromium VI in its paint to 200 pounds per year (0.1 tons per year). GDATP shall maintain records showing the percent Chromium VI of the paint used in the spray booth and maintain annual 12-month rolling total records of Chromium VI usage.
- D. A maximum of one spray gun shall be used at any one time within the booth.
- E. Paint arrestors followed by a two-stage filtration system consisting of a pre-filter and a HEPA filter shall be used to remove PM.
- F. Pressure drop across the pre-filter and HEPA filter shall be measured once per day and be recorded in a log.
- G. Activated carbon filters shall be used to reduce the quantity of VOC emitted. The carbon filter trays will be changed on a floating schedule based on the VOC loading rate, the volume of activated carbon present in the filters, initial saturation tests, and theoretical breakthrough curves provided by the manufacturer. GDAS shall document when the carbon filter trays are changed out.

- H. VOC emissions from the spray booth shall be limited to less than 777 pounds per year, based on a 12-month rolling total. Compliance is based on recordkeeping showing the gallons of paint used and the pounds of VOC per gallon of paint.
- (22) **Evaporator**
- A. GDATP shall maintain quarterly records of the gallons and type of coolant solution processed through the evaporator. The records shall also contain the VOC content of the coolant as found on the MSDS sheets.
- B. GDATP shall keep a quarterly rolling total of gallons of coolant solution processed through the evaporator to ensure compliance with Condition (22)(C).
- C. The evaporator shall not exceed a process rate of 10,000 gallons per year of coolant solution (equivalent to 0.8 tons/year of VOC).
- (23) **Shot Blasting**
- GDATP shall operate a cyclone followed by filters on all shot blasting equipment. A log shall be kept of all routine and non-routine maintenance on the filters.
- (24) **General Process Sources**
- Visible emissions from any general process source, including chrome plating, tin/lead plating, solvent degreasing, evaporator, and shot blasting, shall not exceed an opacity of 20% on a 6 minute block average basis, except for no more than 1 six minute block average in a 1 hour period.
- (25) **Foam-In-Place Process**
- Emissions from the foam-in-place process shall not exceed the following, based on a rolling average:
- | | |
|-----------|-------|
| Compound | Lb/yr |
| Total HAP | 100 |
| VOC | 355 |
- HAPs: Hazardous Air Pollutants identified by the EPA in regulations pursuant to Section 112(b) of the Clean Air Act.
- GDATP shall perform monthly mass balance calculations to determine the quantity of VOCs and total HAPs emitted from the foam-in-place process.
- (26) **Solvent Degreasing**
- The parts washers are subject to the operational and record keeping requirements of MEDEP Chapter 130 which include, but are not limited to, the following:

- A. GDATP shall keep records of the amount of solvent added to each parts washer.
 - B. GDATP shall attach a permanent conspicuous label to each unit summarizing the following operational standards of Chapter 130:
 - 1. Equip each cold cleaning degreaser with a cover that is easily operated with one hand if:
 - a.the solvent vapor pressure is greater than 15 millimeters of mercury measured at 100 °F by ASTM D323-89; or,
 - b.the solvent is agitated; or,
 - c.the solvent is heated.
 - 2. Close the covers on all solvent degreasing tanks when the tanks are not in use;
 - 3. Drain the cleaned parts for at least fifteen (15) seconds or until dripping stops;
 - 4. If used, supply a solvent spray that is a solid fluid stream (not a fine, atomized or shower-type spray) at a pressure that does not exceed ten (10) pounds per square inch gauge pressure (psig);
 - 5. Do not degrease porous or absorbent materials, such as cloth, leather, wood or rope;
 - 6. Minimize drafts to less than 40 meters/minute;
 - 7. Refrain from operating the cold cleaning degreaser upon the occurrence of any visible solvent leak until such leak is repaired; and
 - 8. Do not use any halogenated solvents in the degreasing tanks.
 - C. Total VOC emissions from solvent degreasing shall not exceed 3.0 tpy.
- (27) GDATP shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).
- (28) **A. Annual Emission Statement**
In accordance with MEDEP Chapter 137, the licensee shall annually report by September 1, to the Department, the information necessary to accurately update the State's emission inventory by means of:
 - 1) A computer program and accompanying instructions supplied by the Department;or

- 2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
Phone: (207) 287-2437

B. Biennial Emission Statement

In accordance with MEDEP Chapter 137, the licensee shall report September 1, every two years (2002, 2004, etc.) to the Department, the information necessary to accurately update the State's toxic air pollutants emission inventory by means of a written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions on the Air Toxics emissions inventory portion should be directed to:

Attn: Toxics Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
Phone: (207) 287-2437

- (29) GDATP shall pay the annual air emission license fee within 30 days of **June 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

General Dynamics Armament)
And Technical Products)
York County)
Saco, Maine)
A-434-71-L-M/R)
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DEPARTMENTAL
FINDINGS OF FACT AND ORDER
AIR EMISSION LICENSE

(30) The term of this order shall be for 5 years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: September 12, 2002

Date of application acceptance: September 18, 2002

Date filed with Board of Environmental Protection: _____

This order prepared by Mark E. Roberts, Bureau of Air Quality